

1 **CLAIM AMENDMENTS**

2 **Listing of Claims:**

3 What is claimed, is

4 1. (currently amended) ~~Method~~ A method ~~for comprising~~ transferring a pattern from an elastic
5 stamp to a substrate in the presence of a third medium, the ~~method~~ step of transferring
6 comprising: bringing the stamp into contact with the substrate while controlling a layer of the
7 third medium between the stamp and the substrate to a predetermined thickness, and guiding
8 excess third medium away from the surface of the stamp.

9 2. (currently amended) ~~Method~~ A method according to claim 1, wherein the substrate is rigid.

10 3. (currently amended) ~~Method~~ A method according to claim 1, wherein the substrate is
11 impermeable.

12 4. (currently amended) ~~Method~~ A method according to claim 1, wherein the third medium
13 comprises one or more of gas, water, solvent, polymer, emulsion, and sol-gel precursor, ~~and the~~
14 ~~like~~.

15 5. (currently amended) ~~Method~~ A method according to claim 1, wherein the step of controlling
16 comprises avoiding trapping of the third medium via the stamp matrix being permeable to the
17 third medium.

18 6. (currently amended) ~~Method~~ A method according to claim 1, wherein the step of controlling
19 comprises allowing a nanometer sized gap in the stamp to get filled with the excess third
20 medium.

1 7. (currently amended) ~~Method~~ A method according to claim 1, wherein the step of controlling
2 comprises providing a patterned stamp surface having channels to drain the excess third medium.

3 8. (currently amended) ~~Method~~ A method according to claim 1, wherein the step of controlling
4 comprises filling vias and recesses formed in the stamp with a component having an affinity for
5 the third medium.

6 9. (currently amended) ~~Method~~ A method according to claim 8, wherein the component is
7 hydrophilic.

8 10. (currently amended) ~~Method~~ A method according to claim 9, wherein the component
9 comprises a gel.

10 11. (currently amended) ~~Method~~ A method according to claim 10, wherein the gel is swellable
11 by the third medium.

12 12. (currently amended) ~~Method~~ A method according to claim 11, wherein the step of
13 controlling comprises swelling the gel with the third medium to form protrusions in the stamp.

14 13. (currently amended) ~~Method~~ A method according to claim 1, wherein the step of controlling
15 comprises providing an array of protrusions and recessed zones in the stamp.

16 14. (currently amended) ~~Method~~ A method according to claim 13, wherein the the excess third
17 medium is guided away from the surface of the stamp via the recessed zones.

18 15. (currently amended) ~~Method~~ A method according to claim 13, wherein the array comprises a
19 micrometer-sized pattern subdivided into smaller structures.

20 16. (currently amended) ~~Method~~ A method according to claim 15, wherein the smaller structures
21 are separated by smaller drainage channels.

1 17. (currently amended) ~~Method~~ A method according to claim 16, wherein the smaller drainage
2 channels are connected to a network of larger drainage channels.

3 18. (currently amended) ~~Method~~ A method according to claim 1, wherein the excess third
4 medium is trapped in a shallow lense-like pocket between the stamp and the surface of the
5 substrate.

6 19. (currently amended) ~~Method~~ A method according to claim 1, wherein the step of controlling
7 comprises trapping the excess third medium in a pocket between the stamp and the substrate.

8 20. (currently amended) ~~Method~~ A method according to claim 1, wherein the stamp comprises
9 channels.

10 21. (currently amended) ~~Method~~ A method according to claim 20, wherein the channels define
11 molecular sized gaps between the stamp and the substrate.

12 22. (currently amended) ~~Use of the method according to any preceding claim for~~ A method
13 comprising employing the method of claim 1 for a process taken from a group of processes
14 consisting of:

15 printing biological molecules on a surface;

16 printing dyes on a surface;

17 printing catalysts on a surface;

18 printing acids or bases on a surface;

19 printing of radical initiators on a surface;

20 detection of molecules through proximity by fluorescence resonance transfer;

21 purification and concentration of reactants;

22 in an offset printing process;

23 in a rolling contact process; or

24 any combination of these processes

1 23-30. (canceled)

2 31. (currently amended) ~~A~~ An apparatus comprising a stamp for transferring a pattern to a
3 substrate in the presence of a third medium, the stamp comprising a contact surface and drainage
4 channels formed in the contact surface for guiding excess third medium away from the surface of
5 the stamp.

6 32. (currently amended) ~~A stamp~~ An apparatus according to claim 31 wherein the surface is
7 patterned.

8 33. (currently amended) ~~A stamp~~ An apparatus of claim 31, wherein the stamp comprises an
9 array of protrusions.

10 34. (currently amended) ~~A stamp~~ An apparatus according to claim 32 wherein the patterning
11 comprises a micrometer sized pattern subdivided into smaller structures.

12 35. (currently amended) ~~A stamp~~ An apparatus according to claim 34, wherein the drainage
13 channels extend between the smaller structures.

14 36. (currently amended) ~~A stamp~~ An apparatus according to claim 31, wherein the drainage
15 channels form a network.

16 37. (currently amended) ~~A~~ An apparatus comprising a stamp for transferring a pattern to a
17 substrate in the presence of a third medium, the stamp comprising a permeable hydrophilic
18 matrix for guiding excess third medium away from the surface of the stamp.

19 38. (currently amended) ~~A stamp~~ An apparatus according to claim 37, wherein the stamp
20 comprises active vias.

1 39. (currently amended) ~~A stamp~~ An apparatus according to claim 38, wherein the vias are filled
2 with a material permeable by the third medium.

3 40. (currently amended) ~~A stamp~~ An apparatus according to claim 37, wherein the stamp
4 comprises active recesses.

5 41. (currently amended) ~~A stamp~~ An apparatus according to claim 40, wherein the recesses are
6 filled with a material permeable by the third medium .